

Figure 1

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M-L-S-N-L-R-I-L-L-N-K-A-A-L-R-K-A-H-T-S-M-V-R-N-F-R-Y-G-K-P-V-Q-S-Q-L-K-P-R-D-L-C

amino-terminal end ← → carboxy-terminal end

CCCCGGGTACCTT<sup>22</sup>GCGAGCCCTGGGCTCGCAAGGTACCC  
5'-end ← → 3'-end

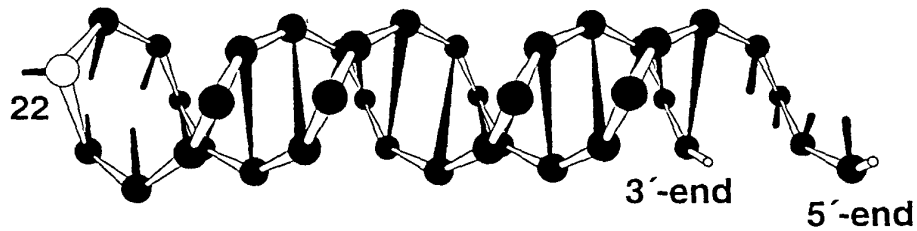


Figure 2

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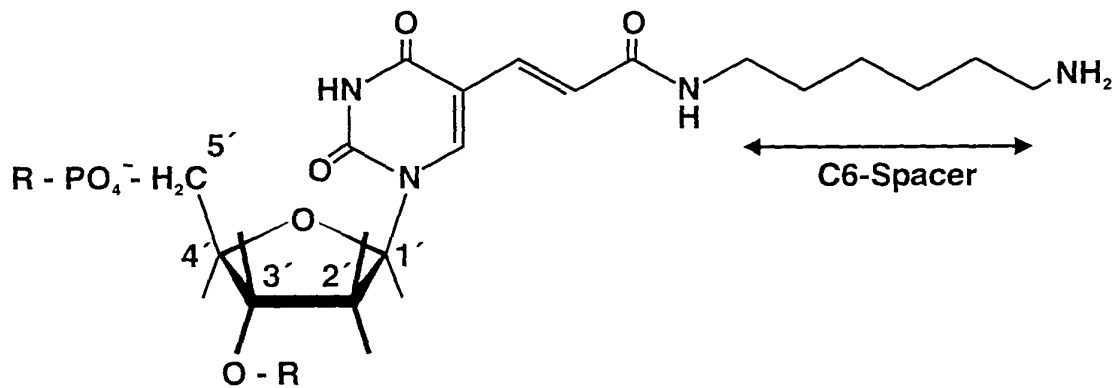


Figure 3

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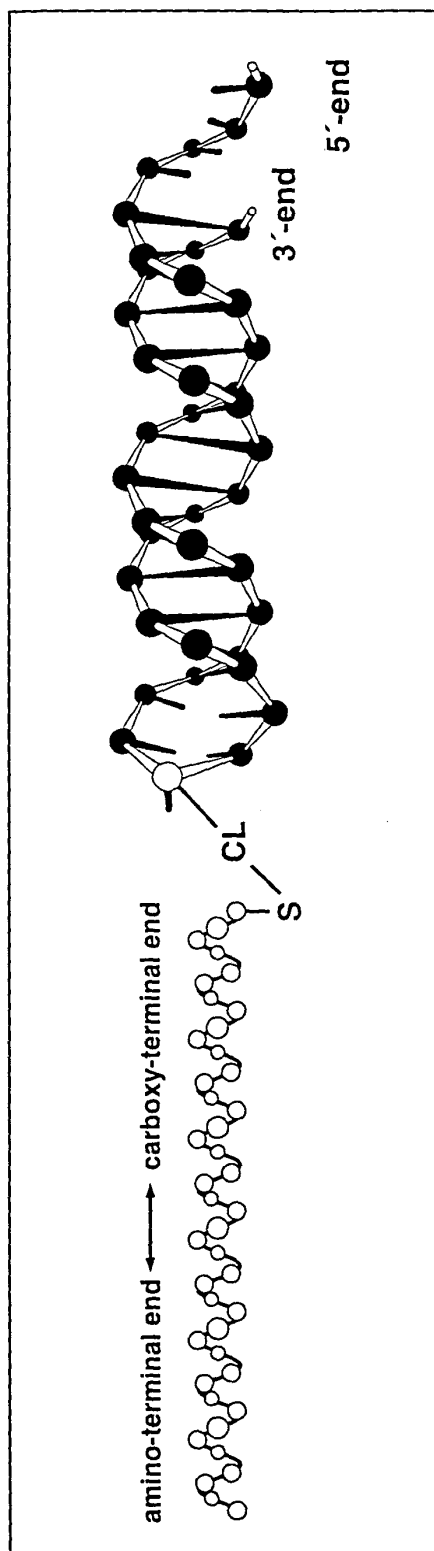


Figure 4

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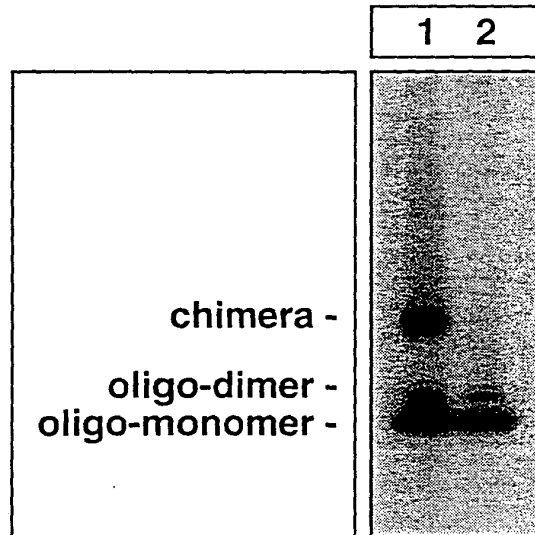
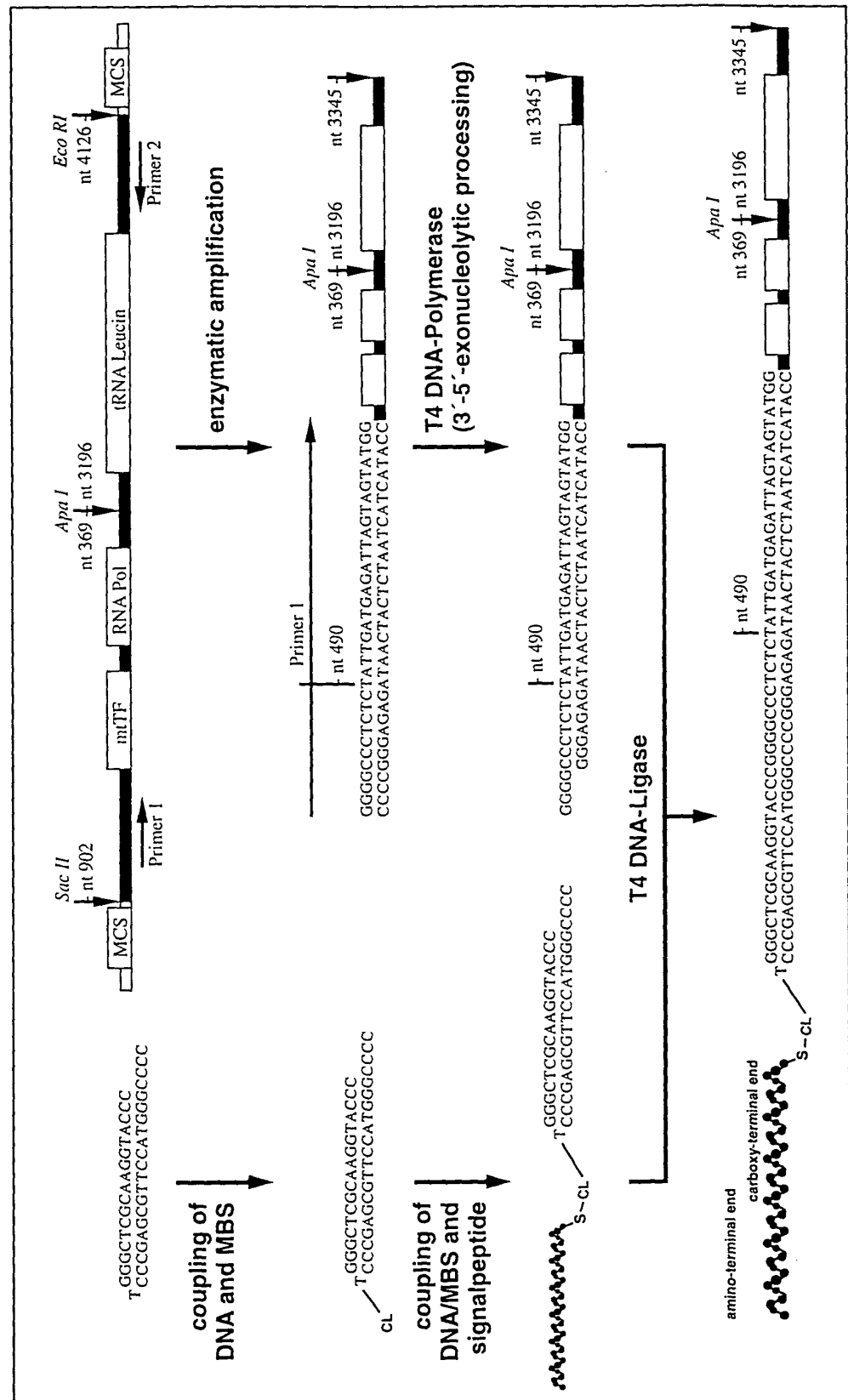


Figure 5a



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Figure 5b

10	20	30	40	50	60
CCGCGGTGGC	TGGCACGAAA	TTGACCAACC	CTGGGGTGTAG	TATAGCTTAG	TAAACTTTC
GGCGCCACCG	ACCGTGCTTT	AACTGGTTGG	GACCCCAATC	ATATCGAATC	ATTTGAAAG
70	80	90	100	110	120
GTTTATTGCT	AAAGGTTAAT	CACTGCTGTT	TCCCGTGGGG	GTGTGGCTAG	CTAAGCGTT
CAAATAACGA	TTTCCAATTA	GTGACGACAA	AGGGCACCCC	CACACCGATC	GATTTCGCAA
130	140	150	160	170	180
TTGAGCTGCA	TTGCTGCGTG	CTTGATGCTT	GTTCTTTTGT	ATCGTGGTGA	TTAGAGGGT
AACTCGACGT	AACGACGCAC	GAACACGAA	CAAGGAAAAC	TAGCACCAC	AATCTCCCA
190	200	210	220	230	240
GAACCTACTG	GAACGGGGAT	GCTTGCGATG	GTAATCTTAC	TAAGAGCTAA	AGAAAGGCT
CTTGAGTGAC	CTTGCCCCTA	CGAACGTACA	CATTAGAATG	ATTCTCGATT	TCTTTCCGA
250	260	270	280	290	300
AGGACCAAAC	CTATTTGTTT	ATGGGGTGAT	GTGAGCCCGT	CTAAACATTT	CAGTGTATT
TCCTGGTTTG	GATAAACAAA	TACCCCACTA	CACTCGGGCA	GATTTGTAAA	GTCACATAA
310	320	330	340	350	360
GCTTTGAGGA	GGTAAGCTAC	ATAAACTGTG	GGGGGTGTCT	TTGGGGTTTG	TTGGTTTCGG
CGAAACTCCT	CCATTCGATG	TATTTGACAC	CCCCACAGA	AACCCCAAAC	AACCAAGCC
370	380	390	400	410	420
GGTATGGGGT	TAGCAGCGGT	GTGTGTGTGC	TGGGTAGGAT	GGGCGGGGGT	GTATTGATG
CCATACCCCA	ATCGTCGCCA	CACACACACG	ACCCATCCTA	CCCGCCCCCA	CATAACTAC
430	440	450	460	470	480
AGATTAGTAG	TATGGGAGTG	GGAGGGGAAA	ATAATGTGTT	AGTTGGGGGG	GACTGTATA
TCTAATCATC	ATACCCTCAC	CCTCCCCTTT	TATTACACAA	TCAACCCCCC	CTGACAATT
490	500	510	520	530	540
AAGTGCATAC	CGCCAAAAGA	TAAAATTTGA	AATCTGGTTA	GGCTGGTGTG	GGGCCCTTT
TTACAGTATG	GCGGTTTTCT	ATTTTAAACT	TTAGACCAAT	CCGACCACAA	CCCGGGAAA
550	560	570	580	590	600
GTCCACACACC	CACCCAAGAA	CAGGGTTTGT	TAAGATGGCA	GAGCCCGGTA	TCGCATAAA
CAGGGTGTGG	GTGGGTTCCT	GTCCCAAACA	ATTCTACCGT	CTCGGGCCAT	AGCGTATTT
610	620	630	640	650	660
ACTTAAAAC	TTACAGTCAG	AGGTTCAATT	CCTCTTCTTA	ACAACATACC	ATGGCCAAC
TGAATTTTGA	AATGTCAGTC	TCCAAGTTAA	GGAGAAGAAT	TGTTGTATGG	TACCGGTTG
670	680	690	700	710	720
CTCCTACTCC	TCATTGTACC	CATTCTAATC	GCAATGGCAT	TCCTAATGCT	ACCGAACGA
GAGGATGAGG	AGTAACATGG	GTAAGATTAG	CGTTACCGTA	AGGATTACGA	TGGCTTGCT
730	740	750	760	770	780
AAAATTCTAG	GCTATATACA	ACTACGCAAA	GGCCCCAACG	TGGTAGGCCC	TACGGGCTA
TTTTAAGATC	CGATATATGT	TGATGCGTTT	CCGGGGTTGC	ACCATCCGGG	ATGCCCGAT
790	800	810	820	830	840
CTACAACCCT	TCGCTGACGC	CATAAACTC	TTACACAAAG	AGCCCCATAA	CCCGCCACA
GATGTTGGGA	AGCGACTGCG	GTATTTTGAG	AAGTGGTTTC	TCGGGGATTT	GGGCGGTGT

850	860	870	880	890	900
TCTACCATCA	CCCTCTACAT	CACCGCCCCG	ACCTTAGCTC	TCACCATCGC	CTTCTACTA
AGATGGTAGT	GGGAGATGTA	GTGGCGGGGC	TGGAATCGAG	AGTGGTAGCG	GAAGATGAT
910	920	930	940	950	960
TGAACCCCCC	TCCCCATACC	CAACCCCTTG	GTCAACCTCA	ACCTAGGCCT	CTATTTATT
ACTTGGGGGG	AGGGGTATGG	GTTGGGGGAC	CAGTTGGAGT	TGGATCCGGA	GATAAATAA
970	980	990	1000	1010	1020
CTAGCCACCT	CTAGCCTAGC	CGTTTACTCA	ATCCTCTGAT	CAGGGTGAGC	TCAAACCTCA
GATCGGTGGA	GATCGGATCG	GCAAATGAGT	TAGGAGACTA	GTCCCACTCG	AGTTTGAGT
1030	1040	1050	1060	1070	1080
AACTACGCCC	TGATCGGCGC	ACTGCGAGCA	GTAGCCCAAA	CAATCTCATA	GAAGTCACC
TTGATGCGGG	ACTAGCCGCG	TGACGCTCGT	CATCGGGTTT	GTTAGAGTAT	CTTCAGTGG
1090	1100	1110	1120	1130	1140
CTAGCCATCA	TTCTACTATC	AACATTACTA	ATAAGTGGCT	CCTTTAACCT	TCCACCCTT
GATCGGTAGT	AAGATGATAG	TTGTAATGAT	TATTCACCGA	GGAAATTGGA	AGGTGGGAA
1150	1160	1170	1180	1190	1200
ATCACAACAC	AAGAACACCT	CTGATTACTC	CTGCCATCAT	GACCCTTGGC	ATAATATGA
TAGTGTTGTG	TTCTTGTGGA	GACTAATGAG	GACGGTAGTA	CTGGGAACCG	TATTATACT
1210	1220	1230	1240	1250	1260
TTTATCTCCA	CACTAGCAGA	GACCAACCGA	ACCCCTTCG	ACCTTGCCGA	GGGGAGTCC
AAATAGAGGT	GTGATCGTCT	CTGGTTGGCT	TGGGGGAAGC	TGGAACGGCT	CCCCTCAGG
1270	1280	1290	1300	1310	1320
GAAGTAGTCT	CAGGCTTCAA	CATCGAATAC	GCCGCAGGCC	CCTTCGCCCT	TTCTTCATA
CTTGATCAGA	GTCCGAAGTT	GTAGCTTATG	CGGCGTCCGG	GGAAGCGGGA	AAGAAGTAT
1330	1340	1350	1360	1370	1380
GCCGAATACA	CAAACATTAT	TATAATAAAC	ACCCTCACCA	CTACAATCTT	CTAGGAACA
CGGCTTATGT	GTTTGTAAATA	ATATTATTTG	TGGGAGTGGT	GATGTTAGAA	GATCCTTGT
1390	1400	1410	1420	1430	1440
ACATATGACG	CACTCTCCCC	TGAACTCTAC	ACAACATATT	TTGTCACCAA	ACCCTACTT
TGTATACTGC	GTGAGAGGGG	ACTTGAGATG	TGTTGTATAA	AACAGTGGTT	TGGGATGAA
1450	1460				
CTAACCTCCC	TGTTCTTATG	AATTC			
GATTGGAGGG	ACAAGAATAC	TTAAG			

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Figure 6a

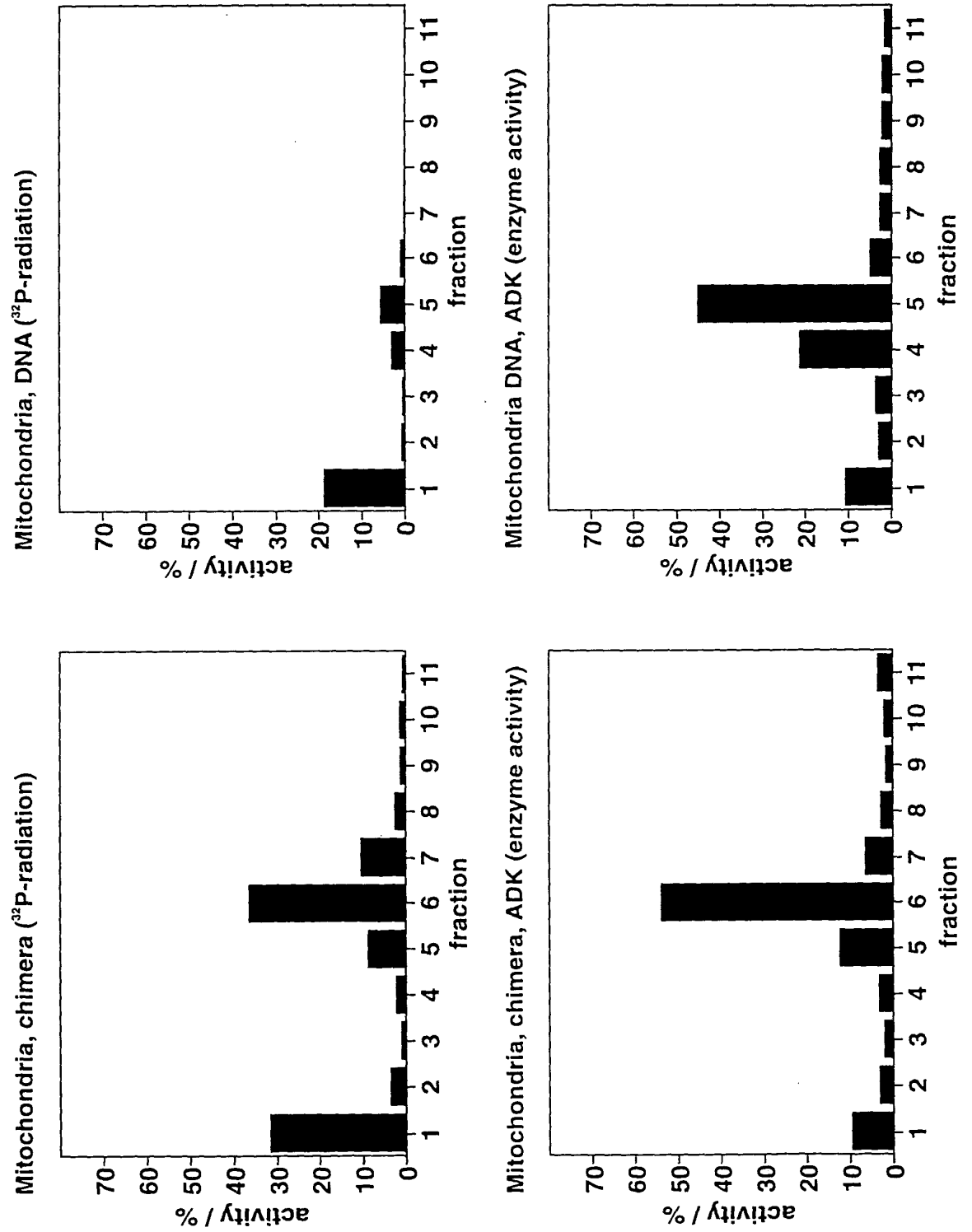




Figure 6b

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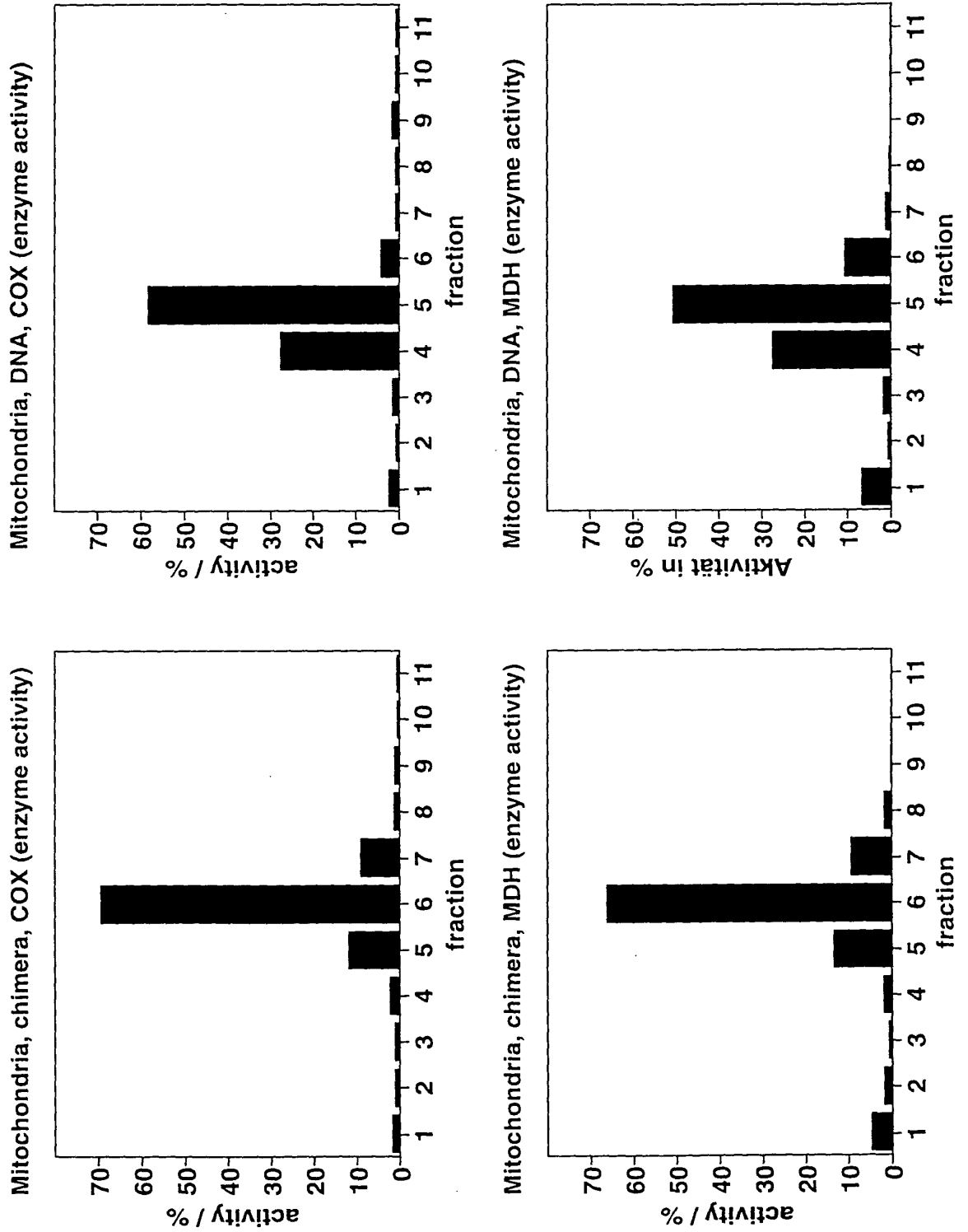


Figure 7a

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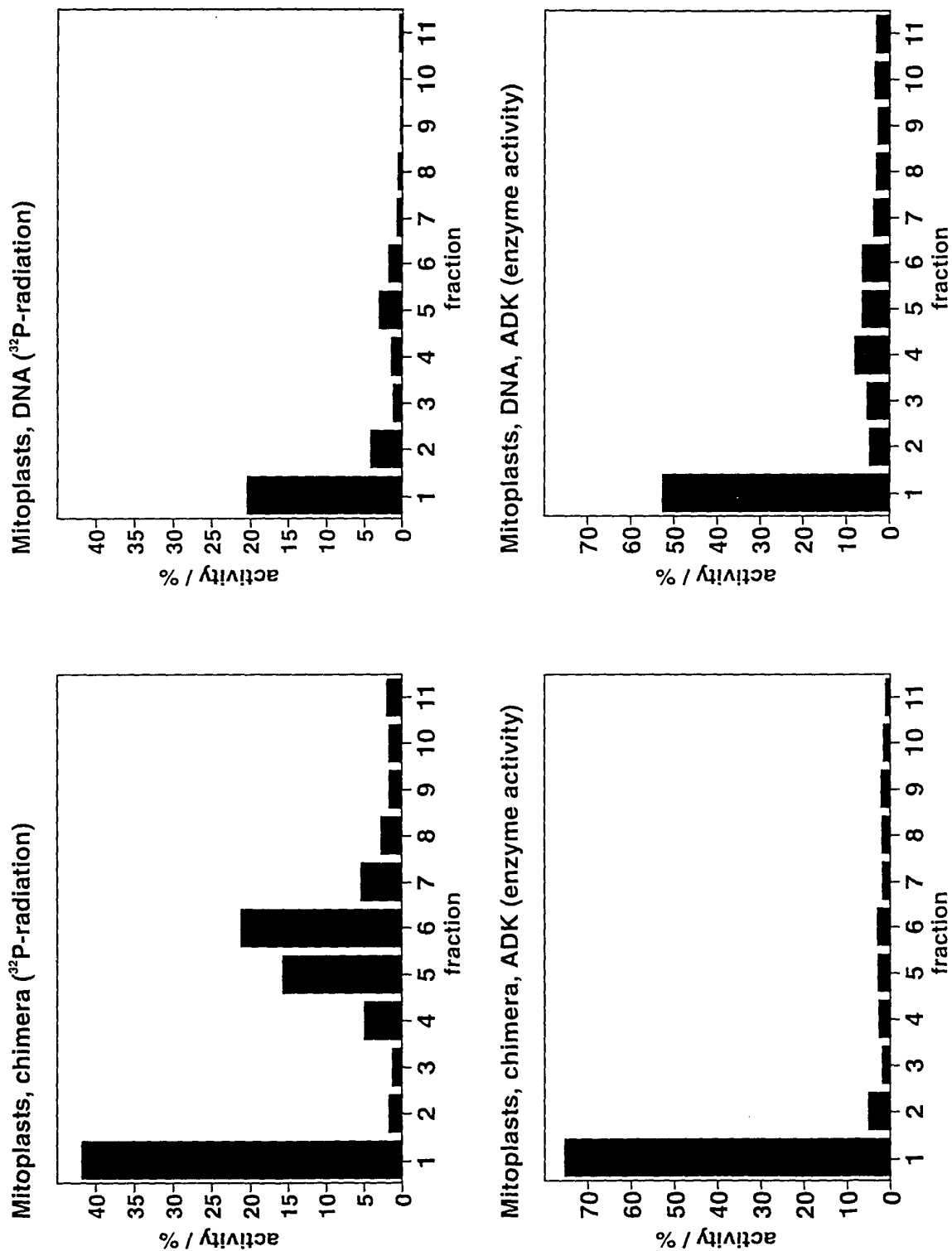


Figure 7b

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08/765244

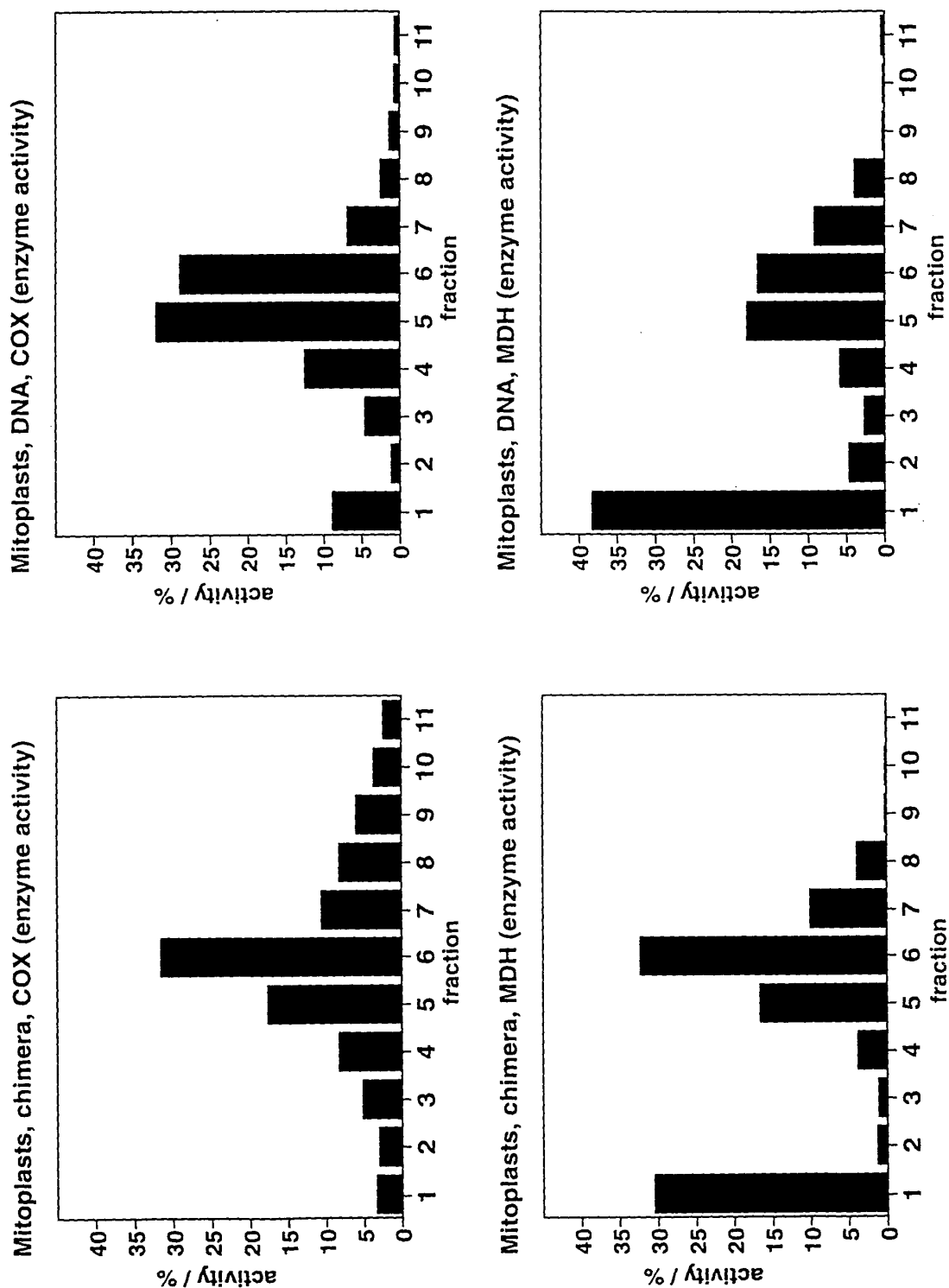


Figure 8

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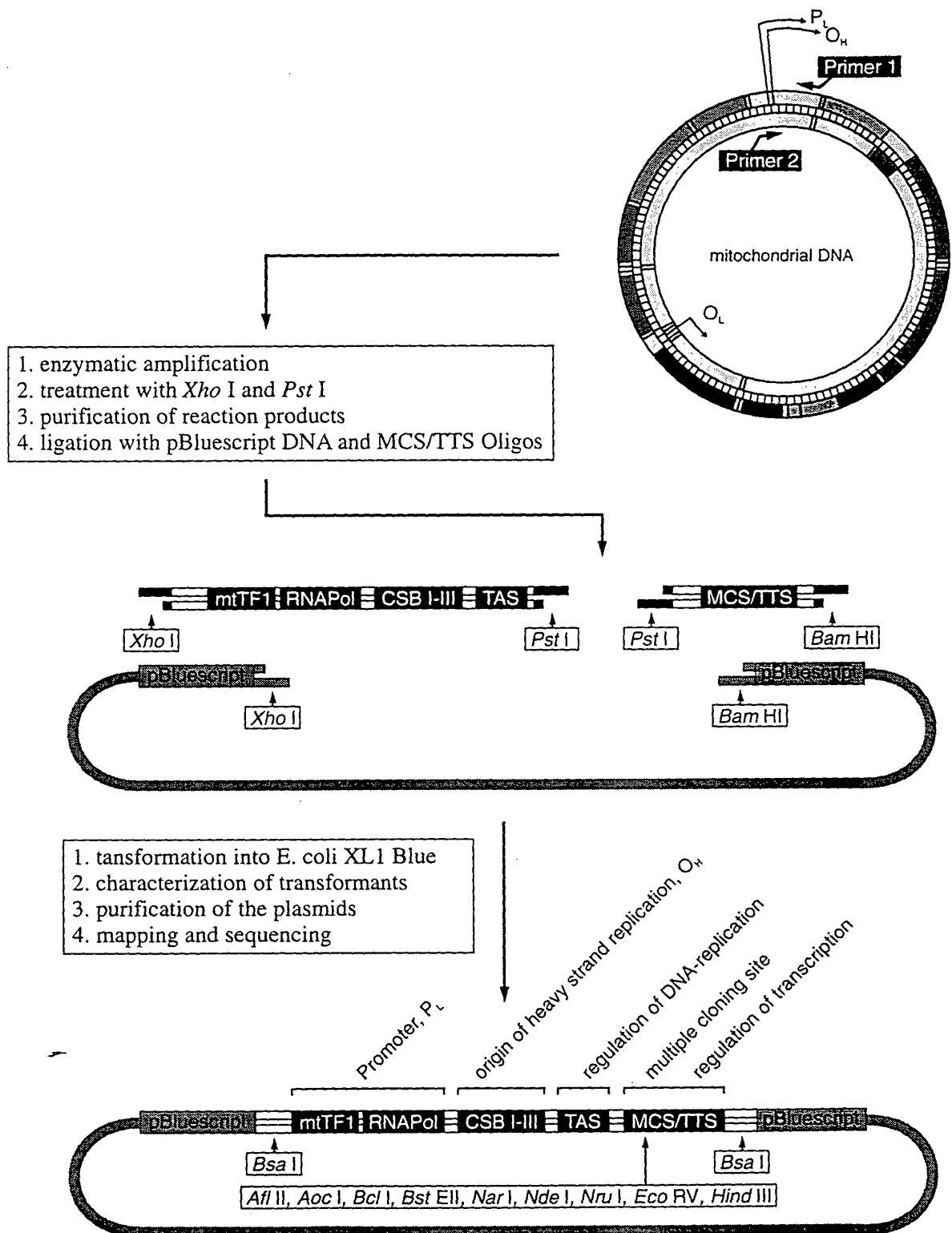


Figure 9

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5' GATATCGCGAAGCTTAAGCGCCTCAGGTCACCATATGATCATTGTTAAGATGGCAGAGCCCGGTAATCGCATATAAATGAGACCG 3'

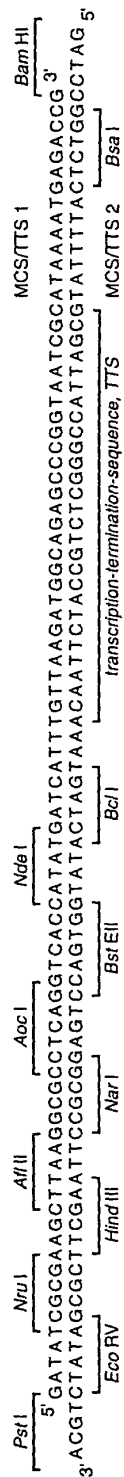


Figure 10

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10 20 30 40 50 60  
 CTCGAGGGTC TCAGGGGCTA ATAGAAAGGC TAGGACCAAA CCTATTTGTT TATGGGGTGA  
 GAGCTCCAG AGTCCCCGAT TATCTTTCCG ATCCTGGTTT GGATAAACAA ATACCCCACT  
  
 70 80 90 100 110 120  
 TGTGAGCCCG TCTAAACATT TTCAGTGTAT TGCTTTGAGG AGGTAAGCTA CATAAACTGT  
 ACACTCGGGC AGATTTGTAA AAGTCACATA ACGAAACTCC TCCATTTCGAT GTATTTGACA  
  
 130 140 150 160 170 180  
 GGGGGGTGTC TTTGGGGTTT GGTGTTTCG GGGTATGGGG TTAGCAGCGG TGTGTGTGTG  
 CCCCCACAG AAACCCCAAA CCAACCAAGC CCCATACCCC AATCGTCGCC ACACACACAC  
  
 190 200 210 220 230 240  
 CTGGGTAGGA TGGGCGGGGG TTGTATTGAT GAGATTAGTA GTATGGGAGT GGGAGGGGAA  
 GACCCATCCT ACCCGCCCCC AACATAACTA CTCTAATCAT CATACCCTCA CCCTCCCCTT  
  
 250 260 270 280 290 300  
 AATAATGTGT TAGTTGGGGG GTGACTGTTA AAAGTGCATA CCGCCAAAAG ATAAAAATTTG  
 TTATTACACA ATCAACCCCC CACTGACAAT TTTCACGTAT GGCGGTTTTT TATTTTAAAC  
  
 310 320 330 340 350 360  
 AAATCTGGTT AGGCTGGTGT TAGGGTTCTT TGTTTTTGGG GTTTGGCAGA GATGTGTTTA  
 TTTAGACCAA TCCGACCACA ATCCCAAGAA ACAAAAACCC CAAACCGTCT CTACACAAAT  
  
 370 380 390 400 410 420  
 AGTGCTGTGG CCAGAAGCGG GGGAGGGGGG GTTTGGTGGA AATTTTTTGT TATGATGTCT  
 TCACGACACC GGTCTTCGCC CCCTCCCCC CAAACCACCT TTAAAAACA ATACTACAGA  
  
 430 440 450 460 470 480  
 GTGTGGAAAG TGGCTGTGCA GACATTCAAT TGTTATTATT ATGTCCTACA AGCATTAAAT  
 CACACCTTTC ACCGACACGT CTGTAAGTTA ACAATAATAA TACAGGATGT TCGTAATTAA  
  
 490 500 510 520 530 540  
 AATTAACACA CTTTAGTAAG TATGTTTCGCC TGTAATATTG AACGTAGGTG CGATAAATAA  
 TTAATTGTGT GAAATCATTC ATACAAGCGG ACATTATAAC TTGCATCCAC GCTATTTATT  
  
 550 560 570 580 590 600  
 TAGGATGAGG CAGGAATCAA AGACAGATAC TGCGACATAG GGTGCTCCGG CTCCAGCGTC  
 ATCCTACTCC GTCCTTAGTT TCTGTCTATG ACGCTGTATC CCACGAGGCC GAGGTCGCAG  
  
 610 620 630 640 650 660  
 TCGCAATGCT ATCGCGTGCA TACCCCCCAG ACGAAAATAC CAAATGCATG GAGAGCTCCC  
 AGCGTTACGA TAGCGCACGT ATGGGGGGTC TGCTTTTATG GTTTACGTAC CTCTCGAGGG  
  
 670 680 690 700 710 720  
 GTGAGTGGTT AATAGGTTGA TAGACCTGTG ATCCATCGTG ATGTCTTATT TAAGGGGAAC  
 CACTCACCAA TTATCCCACT ATCTGGACAC TAGGTAGCAC TACAGAATAA ATTCCCCTTG  
  
 730 740 750 760 770 780  
 GTGTGGGCTA TTTAGGCTTT ATGACCCTGA AGTAGGAACC AGATGTCGGA TACAGTTCAC  
 CACACCCGAT AAATCCGAAA TACTGGGACT TCATCCTTGG TCTACAGCCT ATGTCAAGTG

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790	800	810	820	830	840
TTTAGCTACC	CCCAAGTGTT	ATGGGCCCCG	AGCGAGGAGA	GTAGCACTCT	TGTGCGGGAT
AAATCGATGG	GGGTTCAACA	TACCCGGGCC	TCGCTCCTCT	CATCGTGAGA	ACACGCCCTA
850	860	870	880	890	900
ATTGATTTCA	CGGAGGATGG	TGGTCAAGGG	ACCCCTATCT	GAGGGGGGTC	ATCCATGGGG
TAACTAAAGT	GCCTCCTACC	ACCAGTTCCC	TGGGGATAGA	CTCCCCCAG	TAGGTACCCC
910	920	930	940	950	960
ACGAGAAGGG	ATTTGACTGT	AATGTGCTAT	GTACGGTAAA	TGGCTTTATG	TACTATGTAC
TGCTCTTCCC	TAAACTGACA	TTACACGATA	CATGCCATTT	ACCGAAATAC	ATGATACATG
970	980	990	1000	1010	1020
TGTTAAGGGT	GGGTAGGTTT	GTTGGTATCC	TAGTGGGTGA	GGGGTGGCTT	TGGAGTTGCA
ACAATTCCCA	CCCATCCAAA	CAACCATAGG	ATCACCCTACT	CCCCACCGAA	ACCTCAACGT
1030	1040	1050	1060	1070	1080
GTTGATGTGT	GATAGTTGAG	GGTTGATTGC	TGTACTTGCT	TGTAAGCATG	GGGAGGGGGT
CAACTACACA	CTATCAACTC	CCAACCTAACG	ACATGAACGA	ACATTCTGTAC	CCCTCCCCCA
1090	1100	1110	1120	1130	1140
TTTGATGTGG	ATTGGGT'TTT	TATGTACTAC	AGGTGGTCAA	GTATTTATGG	TACCGTACAA
AAACTACACC	TAACCCAAAA	ATACATGATG	TCCACCAGTT	CATAAATACC	ATGGCATGTT
1150	1160	1170	1180	1190	1200
TATTCATGGT	GGCTGGCAGT	AATGTACGAA	ATACATAGCG	GTTGTTGATG	GGTGAGTCAA
ATAAGTACCA	CCGACCGTCA	TTACATGCTT	TATGTATCGC	CAACAACCTAC	CCACTCAGTT
1210	1220	1230	1240	1250	1260
TACTTGGGTG	GTACCCAAAT	CTGCTTCCCC	ATGAAAGAAC	AGAGAATAGT	TTAAATTAGA
ATGAACCCAC	CATGGGT'TTA	GACGAAGGGG	TACTTTCTTG	TCTCTTATCA	AATTTAATCT
1270	1280	1290	1300	1310	1320
ATCTTAGCTT	TGGGTGCTAA	TGGTGGAGTT	AAAGACTTTT	TCTCTGATTT	GTCCTTGGA
TAGAATCGAA	ACCCACGATT	ACCACCTCAA	TTTCTGAAAA	AGAGACTAAA	CAGGAACCTT
1330	1340	1350	1360	1370	1380
AAAGGTTTTT	ATCTCCGGTT	TACAAGACTG	GTGTATTAGC	TGCAGATATC	GCGAAGCTTA
TTTCCAAAAG	TAGAGGCCAA	ATGTTCTGAC	CACATAATCG	ACGTCTATAG	CGCTTCGAAT
1390	1400	1410	1420	1430	1440
AGGCGCCTCA	GGTCACCATA	TGATCATTTG	TTAAGATGGC	AGAGCCCGGT	AATCGCATAA
TCCGCGGAGT	CCAGTGGTAT	ACTAGTAAAC	AATTCTACCG	TCTCGGGCCA	TTAGCGTATT
1450					
AATGAGACCG	GATCC				
TTACTCTGGC	CTAGG				

Figure 11

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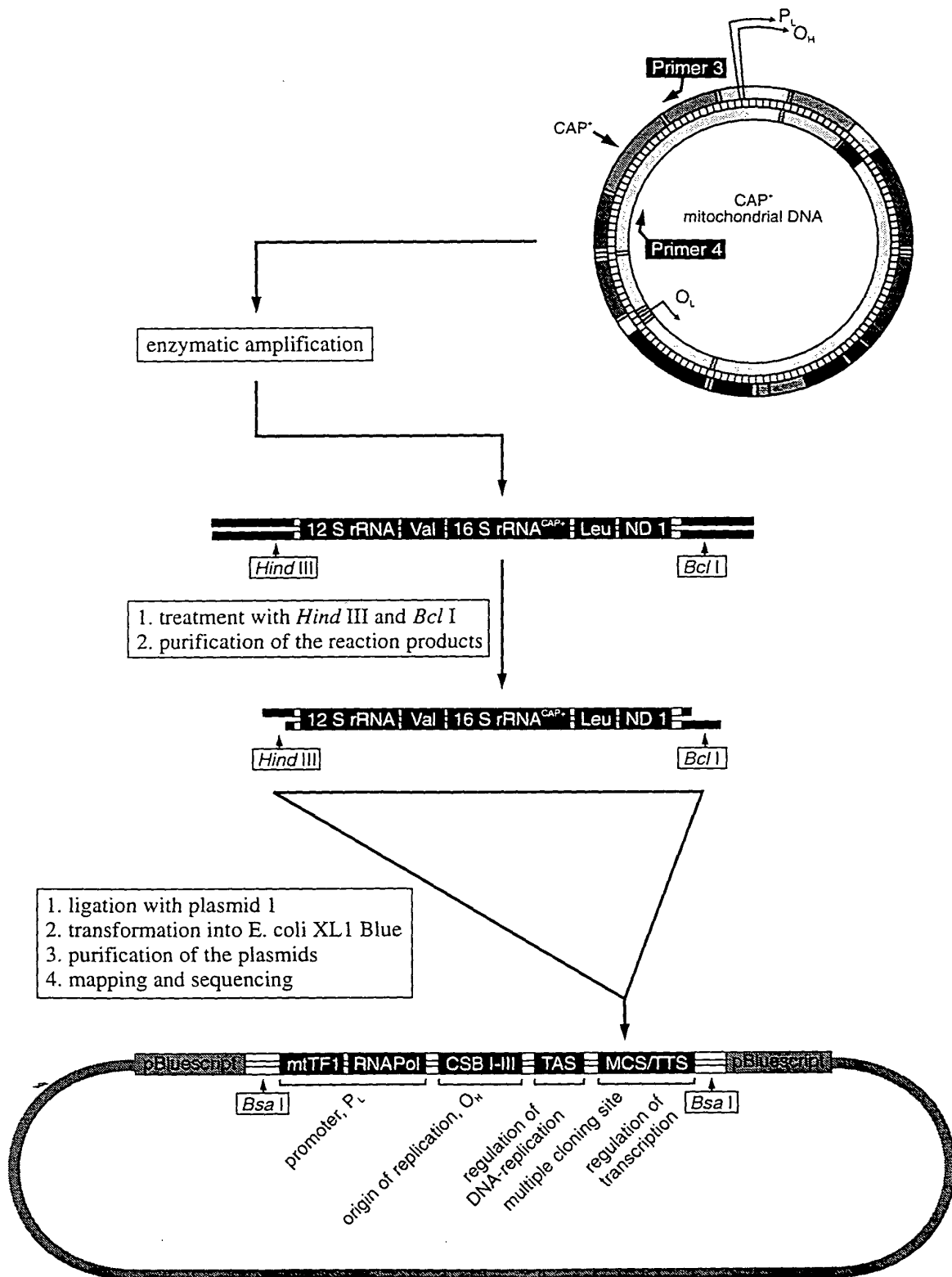




Figure 12

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10	20	30	40	50	60
CTCGAGGGTC	TCAGGGGCTA	ATAGAAAGGC	TAGGACCAAA	CCTATTTGTT	TATGGGGTGA
GAGCTCCCAG	AGTCCCCGAT	TATCTTTCCG	ATCCTGGTTT	GGATAAACAA	ATACCCCACT
70	80	90	100	110	120
TGTGAGCCCG	TCTAAACATT	TTCAGTGTAT	TGCTTTGAGG	AGGTAAGCTA	CATAAACTGT
ACACTCGGGC	AGATTTGTAA	AAGTCACATA	ACGAAACTCC	TCCATTTCGAT	GTATTTGACA
130	140	150	160	170	180
GGGGGGTGTC	TTTGGGGTTT	GGTTGGTTCG	GGGTATGGGG	TTAGCAGCGG	TGTGTGTGTG
CCCCCCACAG	AAACCCCAA	CCAACCAAGC	CCCATACCCC	AATCGTCGCC	ACACACACAC
190	200	210	220	230	240
CTGGGTAGGA	TGGGCGGGGG	TTGTATTGAT	GAGATTAGTA	GTATGGGAGT	GGGAGGGGAA
GACCCATCCT	ACCCGCCCCC	AACATAACTA	CTCTAATCAT	CATACCTCA	CCCTCCCCCTT
250	260	270	280	290	300
AATAATGTGT	TAGTTGGGGG	GTGACTGTTA	AAAGTGCATA	CCGCCAAAAG	ATAAAATTTG
TTATTACACA	ATCAACCCCC	CACTGACAAT	TTTCACGTAT	GGCGGTTTTTC	TATTTTAAAC
310	320	330	340	350	360
AAATCTGGTT	AGGCTGGTGT	TAGGGTTCTT	TGTTTTTGGG	GTTTGGCAGA	GATGTGTTTA
TTTAGACCAA	TCCGACCACA	ATCCCAAGAA	ACAAAAACCC	CAAACCGTCT	CTACACAAAT
370	380	390	400	410	420
AGTGCTGTGG	CCAGAAGCGG	GGGAGGGGGG	GTTTGGTGGA	AATTTTTTGT	TATGATGTCT
TCACGACACC	GGTCTTCGCC	CCCTCCCCCC	CAAACCACCT	TTAAAAACA	ATACTACAGA
430	440	450	460	470	480
GTGTGGAAAG	TGGCTGTGCA	GACATTCAAT	TGTTATTATT	ATGTCCTACA	AGCATTAATT
CACACCTTTC	ACCGACACGT	CTGTAAGTTA	ACAATAATAA	TACAGGATGT	TCGTAATTAA
490	500	510	520	530	540
AATTAACACA	CTTTAGTAAG	TATGTTTCGCC	TGTAATATTG	AACGTAGGTG	CGATAAATAA
TTAATTGTGT	GAAATCATTC	ATACAAGCGG	ACATTATAAC	TTGCATCCAC	GCTATTTATT
550	560	570	580	590	600
TAGGATGAGG	CAGGAATCAA	AGACAGATAC	TGCGACATAG	GGTGCTCCGG	CTCCAGCGTC
ATCCTACTCC	GTCCTTAGTT	TCTGTCTATG	ACGCTGTATC	CCACGAGGCC	GAGGTCGCAG
610	620	630	640	650	660
TCGCAATGCT	ATCGCGTGCA	TACCCCCCAG	ACGAAAATAC	CAAATGCATG	GAGAGCTCCC
AGCGTTACGA	TAGCGCACGT	ATGGGGGGTC	TGCTTTTATG	GTTTACGTAC	CTCTCGAGGG
670	680	690	700	710	720
GTGAGTGTTT	AATAGGGTGA	TAGACCTGTG	ATCCATCGTG	ATGTCTTATT	TAAGGGGAAC
CACTCACCAA	TTATCCCACT	ATCTGGACAC	TAGGTAGCAC	TACAGAATAA	ATTCCCCTTG
730	740	750	760	770	780
GTGTGGGCTA	TTTAGGCTTT	ATGACCCTGA	AGTAGGAACC	AGATGTCGGA	TACAGTTCAC
CACACCCGAT	AAATCCGAAA	TACTGGGACT	TCATCCTTGG	TCTACAGCCT	ATGTCAAGTG
790	800	810	820	830	840
TTTAGCTACC	CCCAAGTGTT	ATGGGGCCCG	AGCGAGGAGA	GTAGCACTCT	TGTGCGGGAT
AAATCGATGG	GGGTTACAAA	TACCCGGGCC	TCGCTCCTCT	CATCGTGAGA	ACACGCCCTA

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850	860	870	880	890	900
ATTGATTTCA	CGGAGGATGG	TGGTCAAGGG	ACCCCTATCT	GAGGGGGGTC	ATCCATGGGG
TAATAAAGT	GCCTCCTACC	ACCAGTTCCC	TGGGGATAGA	CTCCCCCAG	TAGGTACCCC
910	920	930	940	950	960
ACGAGAAGGG	ATTTGACTGT	AATGTGCTAT	GTACGGTAAA	TGGCTTTATG	TACTATGTAC
TGCTCTTCCC	TAAACTGACA	TTACACGATA	CATGCCATTT	ACCGAAATAC	ATGATACATG
970	980	990	1000	1010	1020
TGTTAAGGGT	GGGTAGGTTT	GTTGGTATCC	TAGTGGGTGA	GGGGTGGCTT	TGGAGTTGCA
ACAATTCCCA	CCCATCCAAA	CAACCATAGG	ATCACCCACT	CCCCACCGAA	ACCTCAACGT
1030	1040	1050	1060	1070	1080
GTTGATGTGT	GATAGTTGAG	GGTTGATTGC	TGTACTTGCT	TGTAAGCATG	GGGAGGGGGT
CAACTACACA	CTATCAACTC	CCAAC TAACG	ACATGAACGA	ACATTTCGTAC	CCCTCCCCCA
1090	1100	1110	1120	1130	1140
TTTGATGTGG	ATTGGGTTTT	TATGTACTAC	AGGTGGTCAA	GTATTTATGG	TACCGTACAA
AAACTACACC	TAACCCAAAA	ATACATGATG	TCCACCAGTT	CATAAATACC	ATGGCATGTT
1150	1160	1170	1180	1190	1200
TATTCATGGT	GGCTGGCAGT	AATGTACGAA	ATACATAGCG	GTTGTTGATG	GGTGAGTCAA
ATAAGTACCA	CCGACCGTCA	TTACATGCTT	TATGTATCGC	CAACAAC TAC	CCACTCAGTT
1210	1220	1230	1240	1250	1260
TACTTGGGTG	GTACCCAAAT	CTGCTTCCCC	ATGAAAGAAC	AGAGAATAGT	TTAAATTAGA
ATGAACCCAC	CATGGGT TTA	GACGAAGGGG	TACTTTCTTG	TCTCTTATCA	AATTTAATCT
1270	1280	1290	1300	1310	1320
ATCTTAGCTT	TGGGTGCTAA	TGGTGGAGTT	AAAGACTTTT	TCTCTGATTT	GTCCTTGGAA
TAGAATCGAA	ACCCACGATT	ACCACCTCAA	TTTCTGAAAA	AGAGACTAAA	CAGGAACCTT
1330	1340	1350	1360	1370	1380
AAAGGTTTTT	ATCTCCGGTT	TACAAGACTG	GTGTATTAGC	TGCAGATATC	GCGAAGCTTG
TTTCCAAAAG	TAGAGGCCAA	ATGTTCTGAC	CACATAATCG	ACGTCTATAG	CGCTTCGAAC
1390	1400	1410	1420	1430	1440
TAACATGGTA	AGTG TACTGG	AAAGTGC ACT	TGGACGAACC	AGAGTGTAGC	TTAACACAAA
ATTGTACCAT	TCACATGACC	TTTCACGTGA	ACCTGCTTGG	TCTCACATCG	AATTGTGTTT
1450	1460	1470	1480	1490	1500
GCACCCA ACT	TACACTTAGG	AGATTTCAAC	TTAACTTGAC	CGCTCTGAGC	TAAACCTAGC
CGTGGGTTGA	ATGTGAATCC	TCTAAAGTTG	AATTGA ACTG	GCGAGACTCG	ATTTGGATCG
1510	1520	1530	1540	1550	1560
CCCAAACCCA	CTCCACCTTA	CTACCAGACA	ACCTTAGCCA	AACCATTTAC	CCAAATAAAG
GGGTTTGGCT	GAGGTGGAAT	GATGGTCTGT	TGGAATCGGT	TTGGTAAATG	GGTTTATTTT
1570	1580	1590	1600	1610	1620
TATAGGCGAT	AGAAATTGAA	ACCTGGCGCA	ATAGATATAG	TACCGCAAGG	GAAAGATGAA
ATATCCGCTA	TCTTTAACTT	TGGACCGCGT	TATCTATATC	ATGGCGTTCC	CTTTCTACTT
1630	1640	1650	1660	1670	1680
AAATTATAAC	CAAGCATAAT	ATAGCAAGGA	CTAACCCTTA	TACCTTCTGC	ATAATGAATT
TTTAATATTG	GTTTCGTATTA	TATCGTTCCT	GATTGGGGAT	ATGGAAGACG	TATTACTTAA

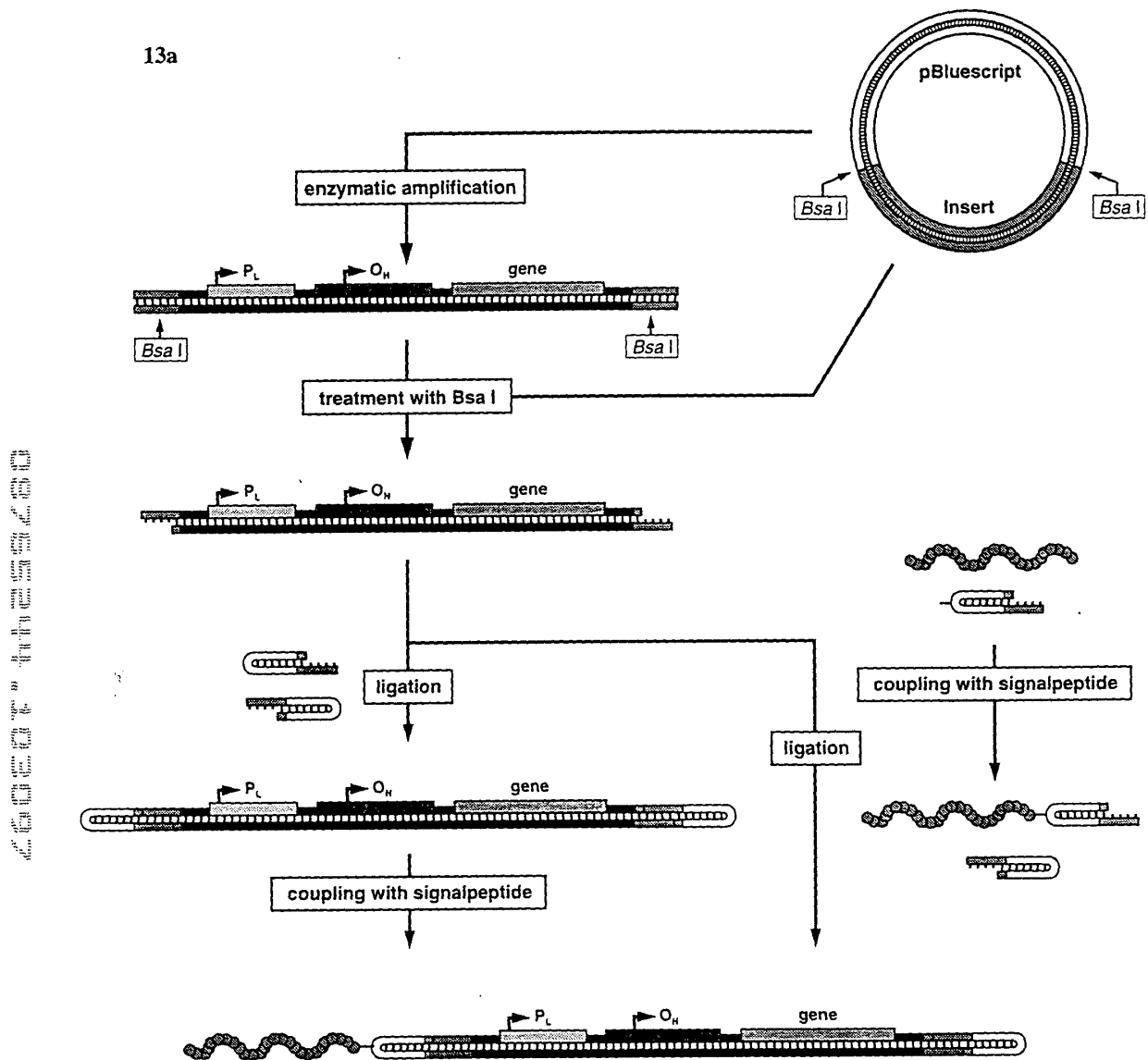
1690	1700	1710	1720	1730	1740
AACTAGAAAT	AACTTTGCAA	GGAGAGCCAA	AGCTAAGACC	CCCGAAACCA	GACGAGCTAC
TTGATCTTTA	TTGAAACGTT	CCTCTCGGTT	TCGATTCTGG	GGGCTTTGGT	CTGCTCGATG
1750	1760	1770	1780	1790	1800
CTAAGAACAG	CTAAAAGAGC	ACACCCGTCT	ATGTAGCAAA	ATAGTGGGAA	GATTTATAGG
GATTCTTGTC	GATTTTCTCG	TGTGGGCAGA	TACATCGTTT	TATCACCCCT	CTAAATATCC
1810	1820	1830	1840	1850	1860
TAGAGGCGAC	AAACCTACCG	AGCCTGGTGA	TAGCTGGTTG	TCCAAGATAG	AATCTTAGTT
ATCTCCGCTG	TTTGGATGGC	TCGGACCACT	ATCGACCAAC	AGGTTCTATC	TTAGAATCAA
1870	1880	1890	1900	1910	1920
CAACTTTAAA	TTTGCCCA	GAACCCCTCT	AATCCCCTTG	TAAATTTAAC	TGTTAGTCCA
GTTGAAATTT	AAACGGGTGT	CTTGGGAGAT	TTAGGGGAAC	ATTTAAATTG	ACAATCAGGT
1930	1940	1950	1960	1970	1980
AAGAGGAACA	GCTCTTTGGA	CACTAGGAAA	AAACCTTGTA	GAGAGAGTAA	AAAATTTAAC
TTCTCCTTGT	CGAGAAACCT	GTGATCCTTT	TTTGGAACAT	CTCTCTCATT	TTTTAAATTG
1990	2000	2010	2020	2030	2040
ACCCATAGTA	GGCCTAAAAG	CAGCCACCAA	TTAAGAAAGC	GTTCAAGCTC	AACACCCACT
TGGGTATCAT	CCGGATTTTC	GTCCGTGGTT	AATTCTTTTCG	CAAGTTCGAG	TTGTGGGTGA
2050	2060	2070	2080	2090	2100
ACCTAAAAAA	TCCCAAACAT	ATAACTGAAC	TCCTCACACC	CAATTGGACC	AATCTATCAC
TGGATTTTTT	AGGGTTTGTA	TATTGACTTG	AGGAGTGTGG	GTTAACCTGG	TTAGATAGTG
2110	2120	2130	2140	2150	2160
CCTATAGAAG	AACTAATGTT	AGTATAAGTA	ACATGAAAAC	ATTCTCCTCC	GCATAAGCCT
GGATATCTTC	TTGATTACAA	TCATATTCAT	TGTACTTTTG	TAAGAGGAGG	CGTATTCGGA
2170	2180	2190	2200	2210	2220
GCGTCAGATT	AAAACACTGA	ACTGACAATT	AACAGCCCAA	TATCTACAAT	CAACCAACAA
CGCAGTCTAA	TTTTGTGACT	TGACTGTAA	TTGTCCGGTT	ATAGATGTTA	GTTGGTTGTT
2230	2240	2250	2260	2270	2280
GTCATTATTA	CCCTCACTGT	CAACCCAACA	CAGGCATGCT	CATAAGGAAA	GGTTAAAAAA
CAGTAATAAT	GGGAGTGACA	GTTGGGTGTG	GTCCGTACGA	GTATTCCTTT	CCAATTTTTT
2290	2300	2310	2320	2330	2340
AGTAAAAGGA	ACTCGGCAAA	TCTTACCCCG	CCTGTTTACC	AAAAACATCA	CCTCTAGCAT
TCATTTTCCT	TGAGCCGTTT	AGAATGGGGC	GGACAAATGG	TTTTTGTAGT	GGAGATCGTA
2350	2360	2370	2380	2390	2400
CACCAGTATT	AGAGGCACCG	CCTGCCCAGT	GACACATGTT	TAACGGCCGC	GGTACCCTAA
GTGGTCATAA	TCTCCGTGGC	GGACGGGTCA	CTGTGTACAA	ATTGCCGGCG	CCATGGGATT
2410	2420	2430	2440	2450	2460
CCGTGCAAAG	GTAGCATAAT	CACTTGTTCC	TTAAATAGGG	ACCTGTATGA	ATGGCTCCAC
GGCACGTTTC	CATCGTATTA	GTGAACAAGG	AATTTATCCC	TGGACATACT	TACCGAGGTG
2470	2480	2490	2500	2510	2520
GAGGGTTTCA	CTGTCTCTTA	CTTTTAACCA	GTGAAATTGA	CCTGCCCGTG	AAGAGGCGGG
CTCCCAAGTC	GACAGAGAAT	GAAAATTGGT	CACTTTAACT	GGACGGGCAC	TTCTCCGCCC

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2530 CATAACACAG GTATTGTGTC	2540 CAAGACGAGA GTTCTGCTCT	2550 AGACCCTATG TCTGGGATAC	2560 GAGCTTTAAT CTCGAAATTA	2570 TTATTAATGC AATAATTACG	2580 AAACAGTACC TTTGTTCATGG
2590 TAACAAACCC ATTGTTTGGG	2600 ACAGGTCCTA TGTCAGGAT	2610 AACTACCAAA TTGATGGTTT	2620 CCTGCATTAA GGACGTAATT	2630 AAATTTCCGT TTTAAAGCCA	2640 TGGGGCGACC ACCCCGCTGG
2650 TCGGAGCAGA AGCCTCGTCT	2660 ACCCAACCTC TGGGTTGGAG	2670 CGAGCAGTAC GCTCGTCATG	2680 ATGCTAAGAC TACGATTCTG	2690 TTCACCAGTC AAGTGGTCAG	2700 AAAGCGAACT TTTCGCTTGA
2710 ACTATACTCA TGATATGAGT	2720 ATTGATCCAA TAACTAGGTT	2730 TAACTTGACC ATTGAACTGG	2740 AACGGAACAA TTGCCTTGTT	2750 GTTACCCTAG CAATGGGATC	2760 GGATAACAGC CCTATTGTCTG
2770 GCAATCCTAT CGTTAGGATA	2780 TCTAGAGTCC AGATCTCAGG	2790 ATATCAACAA TATAGTTGTT	2800 TAGGGTTTAC ATCCCAAATG	2810 GACCTCGATG CTGGAGCTAC	2820 TTGGATCAGG AACCTAGTCC
2830 ACATCCCGAT TGTAGGGCTA	2840 GGTGCAGCCG CCACGTCGCG	2850 CTATTAAAGG GATAATTTCC	2860 TTCGTTTGTT AAGCAAACAA	2870 CAACGATTAA GTTGCTAATT	2880 AGTCCTACGT TCAGGATGCA
2890 GATCTGAGTT CTAGACTCAA	2900 CAGACCGGAG GTCTGGCCTC	2910 TAATCCAGGT ATTAGGTCCA	2920 CGGTTTCTAT GCCAAAGATA	2930 CTACCTTCAA GATGGAAGTT	2940 ATTCCCTCCT TAAGGAGGGA
2950 GTACGAAAGG CATGCTTTCC	2960 ACAAGAGAAA TGTTCTCTTT	2970 TAAGGCCTAC ATTCCGGATG	2980 TTCACAAAGC AAGTGTTTCG	2990 GCCTTCCCCC CGGAAGGGGG	3000 GTAAATGATA CATTTACTAT
3010 TCATCTCAAC AGTAGAGTTG	3020 TTAGTATTAT AATCATAATA	3030 ACCCACACCC TGGGTGTGGG	3040 ACCCAAGAAC TGGGTTCTTG	3050 AGGGTTTGTT TCCCAAACAA	3060 AAGATGGCAG TTCTACCGTC
3070 AGCCCGGTAA TCGGGCCATT	3080 TCGCATAAAA AGCGTATTTT	3090 CTTAAACTTT GAATTTTGAA	3100 TACAGTCAGA ATGTCAGTCT	3110 GGTTCAATTC CCAAGTTAAG	3120 CTCTTCTTAA GAGAAGAATT
3130 CAACATACCC GTTGTATGGG	3140 ATGGCCAACC TACCGTTGG	3150 TCCTACTCCT AGGATGAGGA	3160 CATTGTACCC GTAACATGGG	3170 ATTCTAATCG TAAGATTAGC	3180 CAATGGCTGA GTTACCGACT
3190 TCATTTGTTA AGTAAACAAT	3200 AGATGGCAGA TCTACCGTCT	3210 GCCCGGTAAT CGGGCCATTA	3220 CGCATAAAAT GCGTATTTTA	3230 GAGACCGGAT CTCTGGCCTA	CC GG

Figure 13

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13b

CCCCGGGTACCTTGCGAGCCC<sup>X</sup>  
 CCCATGGAACGCTCGGG

HP 1 (X=modified dT)

TTTTGCAGCTGGATCCCGGGC<sup>A</sup>  
 CGTCGACCTAGGGCCCG

HP 2

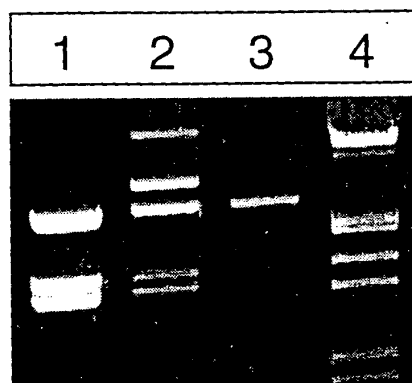
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Figure 15

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15a



15b

right end of plasmid □

left end of plasmid [

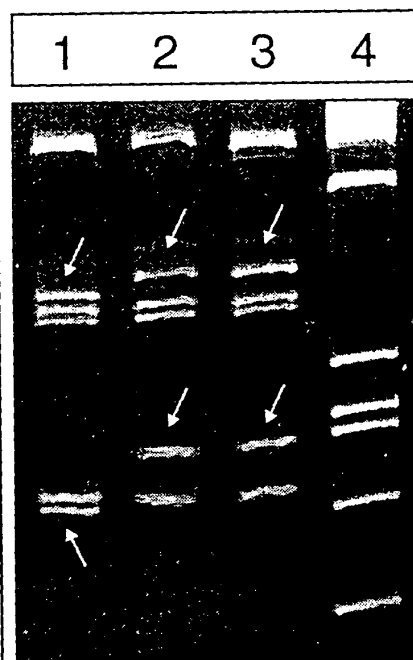


Figure 16

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